



FINAL DRAFT

Technical Report

ISO/DTR 25295

Footwear — Global last measurement systems

ISO/TC 137

Secretariat: **SABS**

Voting begins on:
2025-04-07

Voting terminates on:
2025-06-02

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO/DTR 25295](https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295)

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/DTR 25295

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	1
5 Last dimensions	2
5.1 Last dimensions measurement	2
5.2 Interval of last dimensions	2
5.2.1 Length grading interval	2
5.2.2 Ball girth grading interval	2
5.2.3 Width grading interval	2
5.2.4 Heel height grading interval	2
5.3 Regular and variable reference dimensions	2
5.4 Back of last	3
5.5 Design allowance	3
6 Last systems	3
6.1 General	3
6.2 Last system for male footwear	3
6.3 Last system for female footwear	8
6.4 Last system for children's footwear	15
6.5 Last system for professional sport footwear	20
6.6 Last system for rain footwear	25
6.7 Last system for safety footwear	28
Bibliography	31

[ISO/DTR 25295](https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295)

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 137, *Footwear sizing designations and marking systems*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

ISO/DTR 25295

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>

Introduction

Lasts are the base for footwear production. Standardization related to lasts can guide and regulate the design and production of lasts, thereby improving the fitting and comfort of footwear products.

This document includes partial information obtained from a survey carried out based on the Chinese population in relation to GB/T 3293, the Chinese standard on lasts, which has undergone two revisions and has been implemented for over 40 years.

This technical report not only allows footwear traders, manufacturers, and other stakeholders from various countries to understand the last system, but also strengthens communication and cooperation in the design and standardization of lasts.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO/DTR 25295](https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295)

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>

Footwear — Global last measurement systems

1 Scope

This document contains the sizing of last systems for daily wear footwear including casual footwear, sports footwear and rain footwear.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 19408, *Footwear — Sizing — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19408 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 reference last

last with dimensions as reference size

3.2 last system

complete sizing system of lasts that is set by increasing or reducing with the specified interval based on the dimension of *reference last* (3.1)

3.3 regular reference dimensions

sizes that cannot be changed, such as the key points on the last bottom and ball girth

3.4 variable reference dimensions

dimensions other than the *regular reference dimensions* (3.3)

4 Classification

Footwear size can be classified according to [Table 1](#). For each classification, reference sizes are given.

Table 1 — Footwear size with heel height classification

Dimensions in millimetres

Classification		Footwear size			Heel height of last	
		Common size		Special size		
		Size range	Reference size			
Children's footwear	Infants	90 to 125	110	–	–	
	Toddlers	130 to 170	150	–	–	
	Young children	175 to 205	190	–	–	
	Older children	210 to 250	225	Over 250	–	
Adults' footwear	Female	215 to 250	235	Over 250	Flat	≤ 25
					Middle	30 to 50
					High	55 to 80
	Male	235 to 275	255	Over 275	Flat	≤ 20
					Middle	25 to 35
					High	40 to 50

5 Last dimensions

5.1 Last dimensions measurement

Measurement of last dimensions can be carried out according to ISO 19409.

5.2 Interval of last dimensions

5.2.1 Length grading interval

In practice, 10 mm intervals are commonly referred to as whole sizes, and 5 mm intervals as half sizes.

5.2.2 Ball girth grading interval

In practice, 7 mm intervals are commonly referred to as whole sizes, and 3,5 mm intervals as half sizes.

5.2.3 Width grading interval

In practice, 7 mm intervals are commonly referred to as whole sizes, and 3,5 mm intervals as half sizes.

5.2.4 Heel height grading interval

In practice, 5 mm intervals are commonly referred to as height grading, starting at 20 mm for male last and at 25 mm for female last.

5.3 Regular and variable reference dimensions

5.3.1 The lengths of key points on the last bottom and ball girth are regular reference dimensions.

5.3.2 The widths of key points on the last bottom (including inner width of big toe, outer width of little toe, inner width of first metatarsal, outer width of fifth metatarsal, tread width of heel, etc.) are regular reference dimensions, but half size up or down is allowed based on the width reference dimensions, that is, the width of each part on the last bottom can be set at any value within the range of plus or minus half size.

5.3.3 The other dimensions of the last are variable.

5.4 Back of last

Regardless of style of toe design, the dimension of back of last behind the ball girth can remain unchanged for a last with the same type and same heel height.

5.5 Design allowance

5.5.1 Based on regular reference dimensions of the various length, girth and width on a last with the same footwear size and type, the design allowance can be added to the toe allowance.

5.5.2 The design can be based on regular and variable reference dimensions and other dimensions to achieve comfort and aesthetics of the footwear.

5.5.3 Design allowance can be variable as long as it does not affect wearing, but this does not apply to safety footwear and children's footwear.

6 Last systems

6.1 General

This clause contains the last systems for male, female and children footwear, and for different footwear types.

6.2 Last system for male footwear

The dimensions of reference last for male footwear are given in [Table 2](#) and [Table 3](#).

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/DTR 25295

<https://standards.iteh.ai/catalog/standards/iso/d12190fc-d56d-4484-b49f-c787ea55f61e/iso-dtr-25295>

Table 2 — Reference last dimensions of male footwear (lace-up footwear, tongue-type footwear and high-cut footwear)

Dimensions in millimetres

Last dimensions		Reference last dimensions											
		Lace-up footwear				Tongue-type footwear				High-cut footwear			
		255 (2,5)		255 (2,5)		255 (2,5)		255 (2,5)		255 (2,5)		255 (2,5)	
		Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval
Length	Last bottom length	270,0	±5,0	270,0	±5,0	270,0	±5,0	270,0	±5,0	270,0	±0,5	270,0	±0,5
	Toe allowance	20,4	±0,4	20,4	±0,4	20,4	±0,4	20,4	±0,4	20,4	±0,4	20,4	±0,4
	Toe tip	249,9	±4,6	249,9	±4,6	249,6	±4,6	249,6	±4,6	249,6	±4,6	249,6	±4,6
	Swell point of big toe	224,2	±4,2	224,2	±4,2	224,2	±4,2	224,2	±4,2	224,2	±4,2	224,2	±4,2
	Swell point of little toe	193,6	±3,6	193,6	±3,6	193,6	±3,6	193,6	±3,6	193,6	±3,6	193,6	±3,6
	Position of 1 st metatarsal	179,6	±3,0	179,6	±3,0	179,6	±3,3	179,6	±3,3	179,6	±3,3	179,6	±3,3
	Landing point of forefoot	170,5	±3,2	170,5	±3,2	170,5	±3,2	170,5	±3,2	170,5	±3,2	170,5	±3,2
	Position of 5 th metatarsal	156,7	±2,9	156,7	±2,9	156,7	±2,9	156,7	±2,9	156,7	±2,9	156,7	±2,9
	Landing point of total toe spring	153,0	±2,8	153,0	±2,8	153,0	±2,8	153,0	±2,8	153,0	±2,8	153,0	±2,8
	Waist	99,3	±1,8	99,3	±1,8	99,3	±1,8	99,3	±1,8	99,3	±1,8	99,3	±1,8
Girth	Centre of heel area	40,8	±0,8	40,8	±0,8	40,8	±0,8	40,8	±0,8	40,8	±0,8	40,8	±0,8
	Maximum of heel curve	5,1	±0,1	5,1	±0,1	5,1	±0,1	5,1	±0,1	5,1	±0,1	5,1	±0,1
	Ball girth	243,0	±3,5	243,0	±3,5	239,5	±3,5	239,5	±3,5	246,5	±3,5	246,5	±3,5
Width	Instep girth	245,0	±3,6	245,0	±3,6	239,5	±3,5	239,5	±3,5	251,6	±3,6	251,6	±3,6
	Stick width of ball area	88,8	±1,3	88,8	±1,3	87,5	±1,3	87,5	±1,3	90,1	±1,3	90,1	±1,3
	Tread width of ball area	90,0	±1,3	90,0	±1,3	88,7	±1,3	88,7	±1,3	91,3	±1,3	91,3	±1,3
	Inner width of big toe	34,1	±0,5	34,1	±0,5	33,6	±0,5	33,6	±0,5	34,6	±0,5	34,6	±0,5
	Outer width of little toe	51,7	±0,7	51,7	±0,7	51,0	±0,7	51,0	±0,7	52,4	±0,7	52,4	±0,7
	Inner width of 1 st metatarsal	36,0	±0,5	36,0	±0,5	35,5	±0,5	35,5	±0,5	36,5	±0,5	36,5	±0,5
Height	Outer width of 5 th metatarsal	52,8	±0,8	52,8	±0,8	52,0	±0,8	52,0	±0,8	53,6	±0,8	53,6	±0,8
	Outer width of waist	40,0	±0,6	40,0	±0,6	39,4	±0,6	39,4	±0,6	40,6	±0,6	40,6	±0,6
	Tread width of heel	60,5	±0,9	60,5	±0,9	59,6	±0,9	59,6	±0,9	61,4	±0,9	61,4	±0,9
	Heel height of last ^a	15,0	±0,2	25,0	±0,2	15,0	±0,2	25,0	±0,2	15,0	±0,2	25,0	±0,2
	Toe spring	18,5	±0,2	17,5	±0,2	18,5	±0,2	17,5	±0,2	18,5	±0,2	17,5	±0,2
	Total toe spring	26,0	±0,3	32,0	±0,3	26,0	±0,3	32,0	±0,3	26,0	±0,3	32,0	±0,3

Table 2 (continued)

Last dimensions		Reference last dimensions															
		Lace-up footwear						Tongue-type footwear						High-cut footwear			
		255 (2,5)			255 (2,5)			255 (2,5)			255 (2,5)			255 (2,5)		255 (2,5)	
		Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval	Size	Interval
Other	Toe height	21,0	±0,3	21,0	±0,3	21,0	±0,3	21,0	±0,3	21,0	±0,3	21,0	±0,3	21,0	±0,3	21,0	±0,3
	Height of maximum of heel curve	22,7	±0,3	22,7	±0,3	22,7	±0,3	22,7	±0,3	22,7	±0,3	22,7	±0,3	22,7	±0,3	22,7	±0,3
	Back height	75,0	±1,0	75,0	±1,0	75,0	±1,0	75,0	±1,0	75,0	±1,0	101,4	±1,4	101,4	±1,4	101,4	±1,4
	Convexity of ball area	5,0	±0,1	5,0	±0,1	5,0	±0,1	5,0	±0,1	5,0	±0,1	5,0	±0,1	5,0	±0,1	5,0	±0,1
	Concavity of waist	5,5	±0,1	6,5	±0,1	6,5	±0,1	6,5	±0,1	6,5	±0,1	5,5	±0,1	5,5	±0,1	6,5	±0,6
	Convexity of heel area	4,0	-	4,0	-	4,0	-	4,0	-	4,0	-	4,0	-	4,0	-	4,0	-
	Width of top line	26,0	±0,4	26,0	±0,4	26,0	±0,4	26,0	±0,4	26,0	±0,4	30,0	±0,4	30,0	±0,4	30,0	±0,4
	Length of top line	102,0	±1,9	102,0	±1,9	102,0	±1,9	101,0	±1,9	101,0	±1,9	112,1	±2,1	112,1	±2,1	112,1	±2,1
	Diagonal length of last	269,9	±5,0	268,5	±5,0	268,5	±5,0	269,9	±5,0	268,5	±5,0	282,7	±5,2	282,7	±5,2	282,7	±5,2

NOTE Design allowance of last can be determined based on the toe shape of last.

a The classification and range of heel height of last are given in [Table 1](#).